



Dyslexia, left-handedness, and immune disorders.

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Source: Arch Neurol. 1993 Apr;50(4):411-6

Date: Apr-1993

Language: English

Publication Type: Article

Keywords: Adolescent

Child

Dyslexia - complications - epidemiology - psychology

Female

Humans

Immune System Diseases - complications - epidemiology - psychology

Laterality

Male

Research Support, Non-U.S. Gov't

Statistics

Abstract: OBJECTIVE--To illuminate a possible three-way association between dyslexia, immune disorders, and left-handedness. Geschwind's, Behan's, and Galaburda's hypotheses have been of special interest in this connection. DESIGN--Statistical analysis based on general assessment of the prevalence of the three aforementioned conditions. PARTICIPANTS--There were 734 children included from a total of 1165 in grade 6 (about 12 years of age) in the municipality of Stavanger, Norway. SETTING--Educational and demographic statistics indicate that the municipality of Stavanger is representative of the national population at large regarding the three conditions examined. MAIN OUTCOME MEASURES--A screening test with high reliability and validity was used to assess reading ability. It measured word recognition and phonological decoding. The questionnaires that recorded the students' handedness and immune disorders were filled in by the parents. Handedness was assessed by a Norwegian version of the Oldfield Inventory. A questionnaire concerning allergies and asthma was used to assess the prevalence of immune disorders. RESULTS--The bivariate analyses disclosed a significant association between handedness and dyslexia and a significant but weak association between handedness and immune disorders. No significant association was found between dyslexia and immune disorders. A triadic analysis yielded the following: 66.7% of the left-handed dyslexic children had immune disorders ($P > .05$); 42.1% of the left-handed children with immune disorders had dyslexia (P

PubMed ID: 8460963 [View in PubMed](#)